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REPORT FOR WEEK ENDING APRIL 14, 1928.

JUDITH BASIN:

The winter season in central Montana was rather severe. This was due largely to the fact that snow covered the ground more continuously than normal with very few chinook winds. The minimum winter temperature was 32 degrees below zero on December 31. A light covering of snow protected fall sown crops on this date.

Precipitation for November was more than twice normal, January was normal but the remaining months from December to March, inclusive, were below in this respect. The November snow carried over until January, while the early January snow remained until March. Alternate freezing and thawing weather late in February and early in March was not favorable to fall sown crops.

Winter wheat seeded according to recommended practice appears to be in average condition at this time in the Judith Basin. Although it is too early for final determination on the questionable fields the following conditions have been noted to date. Cool, dry weather during September and October was not favorable to winter wheat, especially on poorly prepared fields. The majority of the fields seeded before August 15 are looking poorly. Most fields seeded from this date to September 10 on standard fallow ground with the furrow drill are in good condition.

Soil moisture conditions are favorable at this time. It has not been dry enough to do field work on the experiments this spring. Precipitation has been recorded eight days out of fourteen this month as the result of light snows. The temperature on the 13th dropped to 5 below zero, a record low point for April at this station.

Maximum temperature 58, minimum, -5; precipitation .12 inch.

HUNTLEY:

Field work was begun on the plats April 5 but as the weather has been more or less stormy most of the time since then, progress has been slow. Today, however, should see the completion of seed bed preparation for small grains in the rotation field and a start on the plats of the pasture and miscellaneous field.

A check-up on the winter survival of perennial crops and fall-sown grains has revealed the fact that alfalfa and brome grass apparently came through the rather severe winter in good shape. Winter wheat sown on fallow has a good stand and is rather more advanced in growth than usual for this date. Winter wheat sown on stubble and corn land is much behind that on fallow in development and the stands are rather patchy, due to irregular germination and injury from drought last fall. Washing out and smothering by ice sheets were also factors contributing to poorer stands on some plats.

Huntley, continued:

Farmers report considerable loss of winter wheat on stubble land due to drought last fall, but the survival on fallow is generally good. As the ground was covered with snow almost continually from early in November until March 1, it is doubtful if winter injuries to wheat can be attributed to low temperatures.

Maximum temperature, 66, minimum, 11; precipitation, .12 inch.

SHERIDAN:

Precipitation during the past winter was heavier than usual and snow covered the ground from the first part of November until the second week in March. A large part of the early November precipitation went into the ground, but the most of that falling later was lost by run-off. Considerable washing of the land was caused by the run-off, which occurred twice during the winter and in the spring.

No field work was possible until April 2. Land for the early date of seeding spring wheat, oats, and barley was prepared and seeded on that date. Work was begun on the rotation field April 6, but was then delayed by storms and freezing weather until April 9. Spring plowing in the rotations was done on the 9th. Some plats were still rather wet to work up well then. Preparation of the rotations for seeding was completed the 12th, and the field was staked on that date. Snow beginning in the afternoon of the same date prevented further field work during the week, although the most of the snow is now gone.

Maximum temperature, 63, minimum, 8; precipitation, .53 inch.

DICKINSON:

The early part of the winter was very severe at Dickinson but since the first week in January temperatures have been mild and the precipitation below average. Both November and December were several degrees below the mean temperature for those months. December had the highest snowfall and the lowest temperature of record for that month.

The snow was all gone soon after March 20 and the ground soon dried out so that some work was done in the fields and a few fields were seeded during the last days of March. A couple of plats of winter wheat were seeded on the station on March 31.

Tillage was started on the rotations on April 2. Wheat was seeded on April 5, about a week earlier than the average date of seeding. Barley was seeded on April 9 and oats on the 10th.

Dickinson, continued:

Wheat varieties were seeded April 12. A series of plats of wheat, oats, and barley were seeded on April 11 date-of-harvesting and other studies in relation to the use of the combine harvester in the area. The first of the rate-and-date seeding of wheat was on the 14th.

Winter grains were covered with snow continuously from the second week in November until the third week in March. The soil contained a fair amount of water in the fall so that the earlier seedings made a good growth. It appears now that nearly all of the wheat seeded on fallow both with the furrow and the common drill is dead. That seeded in grain stubble and in standing corn seems to be coming through with good stands.

Trees and shrubs came through the winter with very little injury directly due to the weather. Some damage was done to a Russian olive hedge and plum trees by mice where the trees were covered by snowdrifts.

The precipitation to date in 1928 is about an inch below normal, but due to the heavy snowfall in November and December the water in the soil is a little above average.

Maximum temperature, 59, minimum, 5; precipitation, .28 inch.
Precipitation April 1-14. .67 inch.

MANDAN:

Agronomy

The winter of 1927-1928 was very cold during the early part and and fairly mild the latter part. November and December were cold. December was the coldest December on record for this area. The average maximum temperature for the month was 3° F, and the average minimum was -14° F. The snowfall was heavy in November and December.

January and February were fairly mild. The last half of March was unseasonably warm. The maximum temperature during the period was 72° F. April to date has been cold. Field work started with plowing on April 4, and has been delayed more than usual because of frozen ground. Wheat in the rotations is being seeded today, April 14.

A good deal of wheat has been seeded over the Missouri Slope area. Some seeding was done around March 20.

Crested wheat grass started growth by March 20, and the rows show green at present, and would furnish some feed.

Mandan, continued:

Soil worked up in good condition for crops, and they are going in under favorable conditions. There has been little wind so far this spring.

The evaporation tank has been frozen over nearly every morning since April 1.

Maximum temperature, 54, minimum, 2; precipitation, Trace.

Horticulture

Pruning of orchard trees and small fruits has been completed. Mulch has also been removed from blocks and trees receiving such winter protection.

A fair set of fruit has been obtained from hand crossing work in the greenhouse. Apples, cherries and gooseberries all set well.

It is too early to accurately estimate the amount of winter injury to fruit trees, but from present indications such injury will neither be unusually severe or unusually mild. Young trees appear to be damaged considerably, but most of the older trees are not seriously hurt.

Transplanting of tomato plants for the tomato breeding plats is in progress. The grounds have been raked.

Shelterbelt

Shelterbelt tree shipping will probably begin the latter part of the coming week. Climatic conditions are not as favorable as last year, when shipping began April 4.

ARDMORE:

The winter of 1927-28 was unusually open. Some cold weather occurred in December, but there were no protracted cold periods. No severe storms occurred during the winter.

Precipitation during the winter months was low. The 1928 precipitation is, as follows: January, .28 inch; February, .28 inch; March, .49 inch; and April to date, .27 inch.

The temperature during March and the first part of April was below normal and the wind velocity was above the average. Some soil blowing took place but there was no really bad blowing day.

Field work commenced on March 21. All of the larger fields of small grain were planted in March. The small grain in fields 2, 5, and 20 was seeded April 5. In the rotation the wheat was seeded April 6, and the oats and barley on April 7. The grain varieties were planted on April 9 and 10.

Ardmore, continued:

The winter was favorable for wintering stock on the range, and no losses due to adverse weather conditions have been reported. An outbreak of anthrax was reported from about 15 miles southeast of Ardmore, but losses were confined to one herd.

All lots of steers in the winter feeding experiment made good gains, except the lot receiving oats straw. The oats straw was very rusty, which may account for the lower gains. The steers in the silage lot gained more than the other lots in spite of a reduction from 30 to 20 pounds in the daily ration per steer. The pens were unusually dry during the winter period and little bedding was needed. The total gains per head of the different lots for the 140 days are as follows:

Daily Ration	Gain
10 lbs. oat straw, 5 lbs. alfalfa hay	46.0 lbs.
15 lbs. alfalfa hay	71.5 lbs.
20 lbs. corn silage, 5 lbs. alfalfa hay	122.0 lbs.
15 lbs. wheat grass hay	66.5 lbs.

The farrowing season began March 17, and 18 sows have now farrowed. There is now an average of 7.7 live pigs per litter.

Mr. J. R. Dawson, Dairy Specialist, visited the station from March 29 to March 31.

Maximum temperature, 60, minimum, 8; precipitation, .23 inch.

ARCHER:

The weather since the first of October, 1927 has been rather mild and dry. There have been no severe storms and the precipitation for the period has been less than the average. The greater part of this decrease occurred during the last three months of 1927. Since then the precipitation has been about normal. However, thus far April has been dry and cold. The total for April, to date, is .02 of an inch.

Spring work started Monday, April 9, and consisted of plowing sod, duckfooting, hauling manure, repair work, hauling soil, sorting potatoes and cleaning yards. The soil is moist and works well when not frozen.

Winter wheat at the station as elsewhere is in good condition. Considerable spring growth has taken place. Winter rye is also in good shape.

The weahter data for the past week is as follows:

Maximum temperature, 52, minimum, 4; precipitation .02 inch.

AKRON:

The winter has been very open and mild with very little snow or precipitation. The ground was bare except at very short intervals after the light snowfalls. While not abundant there was plenty of winter moisture for the wheat, and it is not felt there was any great deep winter damage. Ample moisture during March and April would undoubtedly have brought through a promising winter wheat crop in this region.

The spring thus far has been warm and dry with plenty of wind movement to further test the vitality of the winter wheat. The last moisture of any consequence was received March 16, and it was not sufficient for the needs. Both the fall and the spring plowed rotation plats worked into good seed bed condition. This work was started March 23. The rotation plats were seeded, as follows: The pea and barley plats March 28; the spring wheat plats March 29; and the oat plats March 30. The rotation extension oat plats were seeded March 30. The sheep rotation barley fields were seeded March 26. The barley variety experiment was seeded March 31, and the oat variety experiment April 2. The spring-sown hay crops on the General Forage Variety Experiment were seeded April 3. Last year's bean and soy bean variety ground was seeded to Burt 916 oats April 4. One series of the General Forage Variety Experiment ground was seeded to mixed oats and barley April 6 for hay. Several small increase plats of promising small grain varieties were seeded on fallow about April 7.

The writer has made no inspection trips south of the railroad but reports coming to ear are to the effect that that portion of the winter wheat crop seeded on small grain stubble land is entirely gone. It is reported that this land is being reseeded to spring wheat, to barley and to oats. Some very promising corn ground wheat and rye was seen north of Akron recently on a trip to Sterling.

Here on the station, all winter wheat, except that seeded on small grain stubble land, appears promising at this time. The A and B and E plats of the MC Series, and the new cultural studies with winter wheat on the north end of Series 7, do not as yet show anything. The wheat on these plats did not emerge last fall, so it is impossible to determine positively about the stand until after a consequential rain is received, but no great hopes are entertained. The most promising crop of course is on the fallow, but there appears to be plenty of wheat on the corn ground seeded plats for a good average crop. The winter wheat plats on corn ground of the Variety Experiment appear to have winter killed badly, but there promises to be enough wheat remaining for an average crop if only sustaining moisture is received soon. The early seeded, more forward, winter wheat is already showing the effects of the drought. This is particularly true of the August 15 seeding on fallow of the Rate and Date Winter Wheat Experiment, and on the pastured fallow of the Sheep Rotation Project.

Akron, continued:

The work on the station is well in hand with an active start made towards preparing the rowed-crop land for seeding.

None of the spring seeded small grains have emerged and no great hopes are entertained for emergence until consequential rains have been received. The November 1 seeding of fallow of the Rate and Date Winter Wheat Experiment is now emerging. It appears now that there has been very severe winter killing on the corn ground seeded plats of the Rate and Date Winter Wheat Experiment.

Hard, soil blowing, winds have not been the rule this spring though on the 13th past there was some blowing on certain areas here on the station. Generally speaking there is more vegetable matter on the soil than in the spring of 1926 when such devastating soil blowing was experienced. It is not expected that even with continued dry weather that the soil blowing can be as devastating as during the spring. The recent soil blowing storm damaged the first replication of the winter wheat on the Rate and Spacing corn ground and certain of the wheat plats of the New Methods of Fallow studies. The alleys between these plats are being listed-out in preparation for another soil blowing wind, should it occur. The furrow method of seeding winter wheat appears to be very effective in resisting the first soil blowing winds, though, of course, it is but a matter of time until the ridges are leveled so that unrestricted sweep is accomplished.

A very promising campaign is being carried on against the relatively few ground squirrels remaining on the station grounds.

The recent warm weather swelled the buds of the Spirea Van Houttei and of certain of the plum varieties to the point where cold weather would cause very serious injury. The past week has been cold enough to hold back any further development of the buds of the fruit trees and ornamental shrubs. The Buffalo berry was in full bloom during the past cold week and these blossoms were frozen.

The ewes of the breeding flock have passed the winter very satisfactorily. There have been no ewe losses and lambing is progressing very satisfactorily with a present lamb crop of something more than 150%.

Mr. D. W. Robertson was down during the week of April 2 to 7, taking spring survival notes on the winter wheat nursery, and seeding the spring grain nursery. There has been very satisfactory winter killing, even Kanred on the sheep rotations and Kharkov on the rotation plats showing a rather high per cent of winter killing.

Akron, continued:

Mr. Maynard was also here during the week of April 2 to 7 going over the sheep rotation bulletin which it is planned to issue covering the first 5-years' results. This bulletin is tardy but there has recently been such an insistent demand for information on this project that it was thought best to publish the first 5-years' results.

Mr. E. A. Lungren was here April 9 seeding the rust nursery. Mr. Hansen accompanied him to take visual notes on the pastures.

Mr. Allen, the Extension Hog Specialist, and Mr. Scott, the new Extension Forester for the State, also called for a brief stay on April 9. Mr. Scott was more recently the proprietor of the Kansas Evergreen Nursery at Manhattan, and has had extensive experience with the reforestation of the sand hills in and around Halsey, Nebraska. He should be a very valuable acquisition to the Forestry Force in Colorado.

The fruit garden has been carefully pruned and has recently been given a dormant spray of Bordeaux. The fruiting of the apples last year was very promising, but the fruit was badly disease laden. It is planned to follow a systematic spray calendar this year beginning with the dormant spray which may destroy some of the fungi wintering over on the trees. The fruit spur formation on the apple trees is very promising again this year. The orchard was again covered with barnyard manure, this offering a good place for disposing of the winter's accumulation of manure, besides offering good protection against soil blowing.

Maximum temperature, 67, minimum, 5; precipitation, Trace.

HAVRE:

The early part of the past winter was very severe. November and December were about as cold as we have had on record for these months. The cold weather broke about the first of the year and since that time temperatures have been normal or above.

Farming operations on the station started on March 21. Work has been progressing slowly since then due to intermittent storms and cold weather. Practically all of the rotation plats are now ready but weahter conditions seem too cold to make seeding advisable.

There has been some winterkilling in the winter wheat but it is impossible at this time to tell to what extent stands will be reduced. Early seeding, apparently is in very bad shape where it was seeded with a furrow drill or surface drill. Our September seedings seem still to be in pretty fair shape although the past two weeks have been very hard on it. There has been some seeding of spring wheat in the section west of the station.

Havre, continued:

Range conditions have been fairly good, due to the heavy growth of grass last year. There will be quite a lot of hay carried over from this winter.

The annual Livestock Day was held at the station April 11. The 19 lots of animals that have been on test during the winter were inspected by the visitors during the day. Professor H. W. Vaughan, now head of the Animal Husbandry Department at the State College, and Mr. Louis Vinke of this Department, were at the station and assisted in the preliminary arrangements and in the program. The principal talk of the day was made by Mr. Wallis Huidekper. Mr. Huidekoper is an old stockman and made a very interesting and appreciated talk. The attendance was about 300.

The 43rd Annual meeting of the Montana Stock Growers was held in Havre on the 12th and 13th. The Indian Agents, farmers and teachers also held their district meeting, comprising Montana and a part of North Dakota at Havre, April 11 to 14. There were about 60 of these in attendance.

BELLE FOURCHE:

Aside from December, which was the coldest month on record at this station, the past winter was comparatively open and mild. Very little precipitation was received from January 1 to March 24, and considerable soil blowing took place during this period, causing more or less damage to fall grains.

Plowing of rotation plats was commenced March 24, but frequent light storms and periods of abnormally cold weather during the past three weeks have delayed work in the field to such an extent that wheat, oats, barley, and field peas were not seeded until this week. Spring plowing for corn has been completed, but a snow storm and subsequent freezing of the ground to a depth of 3 to 4 inches have stopped field work for the present.

Winter rye survived the winter practically uninjured and has made a growth of about two inches, but winter injury to fall wheat apparently was quite extensive. Bromegrass is approximately 3 inches high, and alfalfa and sweet clover have commenced growth.

Maximum temperature, 61, minimum, 9; precipitation, .20 inch.

NORTH PLATTE:

Frost had disappeared from the ground and field work was commenced on March 12. Frequent interruptions due to recurring cold spells have occurred since that date. However, all spring grain seedings on the D. L. A. plats were completed during March. Spring wheat had emerged and was frozen down on April 8. Oats and barley, which were seeded somewhat later, have not yet emerged.

North Platte, continued:

There was but little snow or moisture of any kind during the winter months. All months from October to February were considerably below normal. September and March were both above normal, which enabled winter wheat to come through the winter with a high survival and start off well in the spring. The condition is now above normal, but recent high winds and low temperatures have done some damage. Alfalfa has been considerably damaged on account of growth starting during warm periods and freezing back later. There is a better storage of moisture in the soil than for several years.

HAYS:

The past winter has been another one of those "unusual" winters. Every season in this section seems to be an "unusual season". I am beginning to wonder just what is a "normal" season.

The four month period October to January, inclusive, broke a sixty year "dry" record with a total precipitation for the period of .16 inch. There occurred no real blizzard during the winter. Most of the cold weather occurred during the month of December. There were seven "below zero" days, five of which occurred in December and two in January, the lowest temperature being 12 degrees below zero January 3, after which the real winter seemed to have been broken. February temperatures averaged 4.4 degrees above normal, and some 80 (or above) degree maximum temperatures occurred during March. April thus far has been spring-like except for the past week during which some light freezing minimum temperatures have occurred, the lowest having been 19 on April 9 and 17 on April 14. The warm weather during February and March together with about one and one-half inch precipitation for each month has brought forth an early spring. There was very little snow during the winter and very little wind,- not even enough to start soil blowing under favorable soil blowing conditions. Conditions have been exceptionally favorable for early tillage work. Plowing could have been done during a good portion of both February and March.

All small spring grain crops, field peas and brome grass were sown on the project March 12 and 13. Every method of seed bed preparation produced fine top soil condition for seeding. All crops came up to a good stand promptly and now look fine except for having been slightly nipped by the freezes of the past week. It is not believed any of these crops are permanently injured by the freezes. The growth on alfalfa sod, however, which had started a nice growth was killed to the ground by the freezes.

Winter wheat on the project looks fine on all but a few of the plats that were worked late. On these plats, generally the stand is fair to good, but the color is of a lighter green shade and the growth is much less vigorous, which makes this wheat look poor when compared with wheat on early fall plowing, listing and on fallowed ground. The light growth is especially noticeable on the late disking and stubbled in plats.

Hays, continued:

On fallowed ground the wheat is six inches high and covers the ground completely. The growth on early fall plowed ground and on listed ground also covers the ground, but the growth is not so heavy, although there is not as much difference between the growth on early plowing and on fallowed ground as sometimes occurs, but there is more growth on these plats than is desirable at this time. It is hoped the light freezes will hold back the growth.

The wheat on all the commercial fields of the Experiment Station, most of which were prepared by listing, covers the ground and looks fine.

Wheat is reported very good east and south of the station, but gets rapidly poorer as one goes north or west from Hays, and after a few miles either north or west considerable acreage is being abandoned.

Hays seems to be near the boundary line that separates the good wheat of the State from the poor and is fortunate in being on the good side. In this immediate vicinity all the evidence indicates that any poor prospects for wheat are a result of untimely work in the preparation of the seed bed last fall. This is extremely noticeable as one goes north or west until a point is reached where the rainfall was so limited that all methods except fallow failed.

GARDEN CITY:

The past fall and winter have been dry. The 20-year average rainfall from October 1 to April 1 is 3.4 inches, whereas only 1.41 inches were received during the past five months.

In spite of the dry weather winter wheat is in fair condition. In most cases it made little growth until rain was received in February. Practically none of the crop had developed its secondary root system until after those rains were received. Winter wheat on the project looks promising but has little subsoil moisture under it.

A large amount of barley was seeded in this county this spring. The spring small grains were seeded on the station early this week.

High winds of the past ten days have blown out a fairly large acreage of wheat and have done a considerable amount of damage to the other small grains that were up.

A temperature last night of 15, no doubt killed the early blooming fruit. Alfalfa also shows some frost damage this morning.

DALHART:

The Panhandle of Texas has been hard hit during the past winter. There was a large acreage of winter wheat planted in this section as is the usual practice among the farmers. Conditions during September were favorable but there has been very little precipitation since. In a few localities over this section there was no suffering for rain at any time during the past summer and conditions remained favorable for small grains. There was a good supply of underground moisture in these localities for winter use of the wheat. The wheat in these sections looks as favorable as at any point between here and Woodward, Oklahoma. In the remaining territory where there was a lack of rainfall there has been considerable loss. In some instances the entire small grain crop is a loss, in others, on about an average the stand runs at from 50 to 75%. The winter small grains on the station have about the same average. These are still green and growing but have a rather sickly color.

Most of the precipitation recorded over the past seven months has been in March and April. The total for the seven months is 1.55 inches, 1.09 of which was recorded in March and April. Of this amount, .80 inch fell on three consecutive days in March. This soaked down sufficiently to put the soil in good shape for early spring plowing.

All of the plats have been plowed to date except the late spring plowing on plats c.c.a. The plows have been going steady for some time and the fields are in fine shape to take up some moisture. The oat plats were prepared and seeded to oats during March, after the precipitation was recorded. It has been so dry since that date that the oats are not all sprouted but a pretty good stand is showing above ground at this writing. Sweet clover dates have been planted regularly since November 15. The last date was seeded today. The first four dates came up at the same time and the fifth just a few days later.

The fruit is about all killed in this section. There are approximately 20% of the apricots alive on the station trees, these having bloomed and set before the late hard freezes. The peaches are all gone and about 60 to 75% of the cherries are killed, among the varieties of bearing age at the station. The minimum temperature recorded this morning is 21. The grapes have not put out any yet so are apparently safe. The Chinese elms managed to get a very light crop of seed past these freezes.

Maximum temperature, 72, minimum, 18; precipitation, .14 inch.

TUCUMCARI:

Field work to date has consisted solely of listing the north field plats and some 20 acres increase. While wind movement has been low this spring, it is considered advisable to delay plat plowing until most danger of high winds is past. Nearly an inch of precipitation a week ago, in the form of wet snow, greatly improved soil tilth.

Tucumcari, continued:

An unusually large number of trees have been planted on the station this spring and something over 600 evergreens were placed in slatted frames. Practically all trees in the variety test survived the extremely adverse conditions of a year ago and made fairly normal growth. Of some ten varieties of evergreens, all have proven hardy and have made fair growth with the exception of the Colorado and Black Hills spruce.

Mean temperatures for the past four months have been near the 23-year average; wind velocity has been unusually low the past two months, and precipitation has been sufficient to cause survival of most wheat on the plains, provided it was seeded early and well rooted. At present much of the wheat is unusually good, although in other neighborhoods abandonment will be high. The county as a whole has a better-than-average prospect for this crop. Ranges have been very good, and with no extreme temperatures and no heavy snows, livestock is in much better condition than usual. Surface soil is well supplied with moisture, but doubtless soil moisture samples, taken yesterday, will disclose the fact the lower levels are somewhat low.

The following figures show that precipitation has been very spasmodic the past six months:

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
23-year average	1.42	0.72	0.68	0.31	0.50	0.75	1.68
1927--1928	0.18	0.02	0.09	0.00	0.75	0.09	0.94 (To Apr. 14.)

Late planting, with resultant late harvesting and threshing, last year prevented presentation of some crop yields of this station in the News Letters. Precipitation January 1 to June 8 totaled only 0.51 inch, but from that date until harvest rainfall was sufficient to hasten growth and maturity of crops. Most rotation plats were planted from June 20 to 25, while the killing frost of October 12 was the earliest on record. In spite of immaturity of most kafir plats and a few milo plats, yields were fairly satisfactory. With an annual precipitation of 13.59 inches, (12.82 inches of which fell in the growing period, fortunately) the average of 39 milo plats was 31.3 bushels; 18 kafir plats, 21.9 bushels; 5 sorgo plats, 6780 pounds cured fodder, and 9 cowpea plats 2778 pounds cured hay. Corn was immature when frosted and produced only 10.4 bushels, average 7 plats; while cotton failed to mature.

Fruit trees promised a heavy yield, peaches blooming heavily in late march, with other fruits not much later. Heavy freezes of the past week have killed all peaches and plums, many of the apples and pears, and the early blooms on cherries. During the past two days of warmer weather late buds on apples and cherries are opening and have a chance of survival.

Maximum temperature, 78, minimum, 23; precipitation, .04 inch. Evaporation, 0.985 inch. Average hourly wind velocity, 5.5 miles.

BIG SPRING:

Weather conditions during the past winter have been dry and mild, and as a whole comparatively free from the usual high winds. The fall months of October, November, and December were very dry. Winter wheat made little or no growth during this time. Fall plowing of some of the plats in the D. L. A. project was attempted in December; although all of the plats requiring this treatment were plowed, a rough job was accomplished as the soil turned up in large clods.

Several showers during February moistened the soil up so that a fairly good job of plowing could be done. The general fields were plowed during this month.

The following table shows the rainfall for the past six months as compared with a 20-year average for these months:

Year	Oct.	Nov.	Dec.	Jan.	Feb.	March
1927 and 1928	0.45	T	0.42	0.35	0.75	0.02
20-year average	2.14	1.19	0.66	0.36	0.60	0.76

There was little or no soil movement as the result of high winds during February and March. During the past two weeks several hard blows have occurred but little soil movement accompanied them.

The first snow storm of the winter occurred April 7 when three inches of snow fell. This was followed up by another of two inches this morning. The fruit crop promises to be light again this year as a freeze during the latter part of March killed the buds and blossoms of many of the peach varieties; plums and cherries do not seem to be injured to any extent.

The April 15 date of seeding of sorghums and cotton was to have been made today, but weather conditions would not permit. This planting will now be made Monday if conditions are favorable.

Due to the fact that pink boll worms were discovered in Howard County last fall, this county, along with several others, has been put in the regulated zone. This means that all cotton seed will have to be sterilized and all lint fumigated before it can be sold.

LAWTON:

Fall sown grains were favored with an initial supply of soil moisture that produced an excellent growth early in the season. This growth, however, was not supplemented with sufficient rain to produce much winter pasture, and subsequent growth during the spring has been only moderate.

Lawton, continued:

Rainfall during the six months period October 1 to March 31, inclusive, was deficient to the amount of 3.29 inches. Precipitation during that time, with but few exceptions, consisted of light rains and showers. April precipitation to date as recorded on the station amounts to .58 inch. Torrential rains, hail and wind storms in the southeastern part of the county April 4 resulted in considerable property damage.

Although wheat has made but moderate spring growth it is in pretty good condition where sown on well prepared seed beds. In most instances the crop should make about normal development with well distributed rains the remainder of the season. A distinct need of rain was showing the latter part of March and the fore part of April when dry, windy weather prevailed. Precipitation of 0.51 inch April 4 followed by a few days of cloudy, unsettled weather was of considerable benefit.

Fulghum oats seeded at the rate of 6, 8, and 10 pecks per acre on September 15, 25, October 5, and 15 made an excellent showing in the fall but were completely winterkilled by freezing temperatures in December.

The spring seedings of oats in the rate and date tests were started January 30 and completed March 10. Although the February seedings emerged slowly germination was good on all dates and rates.

Thirteen varieties in the varietal block were seeded February 2 and produced good stands.

Only a very small per cent of winter barley throughout the county survived the winter. In the seeding dates ranging from September 15 to November 15 winterkilling of Wisconsin No. 519 was complete except on September 15, 25 and October 5. Stands on these three dates, especially October 5, were reduced to a very low point. Winter killing was complete in the varietal test seeded September 24, but a duplicate seeding made October 5 finally resulted in the survival of a very thin stand of each variety except Orel, which was entirely killed. Tenn. No. 3546 showed considerably more resistance than Tenn. No. 66, Han River, Pidor, and Tenn. No. 3546 all show about the same resistance.

Each variety made an excellent growth in the fall and early winter. Temperatures of 6 degrees above zero on December 7 and subsequent low temperatures up to January 2 killed 90 per cent or more of the leaves. A dry surface soil obtained during this period.

Wisconsin No. 519, seeded on disked cowpea land on a rotation plat October 5, came through the winter in excellent shape and is in a promising condition at the present time.

Lawton, continued:

Green bug damage to wheat in the southwestern part of the State this year was a little heavier than usual. The damage was very spotted and heavy only in local instances. No damage occurred on the station.

Alfalfa and native grasses have grown slowly this spring. Initial growth of sweet clover in the second year period began about March 5. Sweet clover and alfalfa were seeded on the rotation plats April 6. A few promising strains of sweet clover previously grown in the nursery block were also increased on that date.

Corn planted April 2 has not yet emerged but appears to be well sprouted. Spring plowing for row crops on the rotation plats was completed during the week. Although the land was harrowed as rapidly as it was plowed the surface dried out quickly. The first planting of grain sorghums and forage sorghums was made April 14. A scant supply of surface moisture under the present drying weather conditions may not be sufficient for satisfactory germination.

Preparation of land for cotton and feed crops on the farms of the county is pretty well completed and some planting is being done. The prevailing loss of winter barley and the profitable returns from cotton last year are likely to be responsible for an increased cotton acreage in 1928.

A killing frost March 30, with a temperature of 25°, heavily damaged peaches and plums that were in bloom. A heavy frost also occurred April 10 with a temperature of 29° but apparently did not cause much damage. Sweet clover, alfalfa and garden crops were only lightly wilted for a few hours.

Violent changes in temperature accompanied by north winds of high velocity have been unfavorable features of March and April weather. On March 29 the temperature dropped from a maximum of 92 to 38. On April 14 a change of 45 degrees in temperature was accompanied by a wind velocity of 30 to 35 miles per hour during the night.

Wide and sudden changes in temperature, a deficient precipitation and a prevailing high wind velocity have all combined to make the season rather unfavorable so far.

WOODWARD:

T The first fifteen days of April have been characterized by high winds and three successive freezes which have killed practically all fruit except grapes and apples, and even these are probably severely injured.

Woodward, continued:

Spring work to date has consisted of building roads, planting nursery stock and pruning and trellising vineyard. Several days were spent over the past week in picking seed of Ulmus pumila, which is of questionable fertility because of freezes.

In a recent trip to Guymon, Oklahoma, it was noted that wheat in Oklahoma and Texas Panhandles is much more promising than further east, though south of Canadian River in Texas it is reported wheat is practically gone.

Rainfall to date this spring has been light, and wheat is now in need of moisture and has probably suffered enough already so that heavy yield is improbable.

Maximum temperature, 71, minimum, 22; precipitation, .03 inch. Evaporation, 1.708 inches. Average hourly wind velocity, 10.4 miles.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

APR 21 1928

REPORT FOR WEEK ENDING APRIL 21, 1928.

HAVRE:

Minimum temperatures during the past week were below freezing each night with an absolute minimum of 18 on the 18th. Although maximum temperatures have not been high, there was a maximum of 59 on the 17th. These weather conditions have practically held vegetative growth at a standstill.

Seed bed preparation is progressing rapidly with some seeding. All of the early dates of seeding were made. The rotations are all ready to seed as soon as the early growth of weeds start enough to cultivate.

Indications are that there will be a decided increase in the acreage of wheat in this section this year. Some of this acreage is going in on fair methods. There is a great deal of land that has been rented that has been idle for from three to eight and nine years. The chief objection in some localities is that there is not enough gone-back land subject to rental. There is a fair acreage being broken, most of which will go into flax.

JUDITH BASIN:

The past week has been unusually cold with light snow falling on five days of the week. The temperature dropped below freezing each night with a minimum of 15° on the 18th. Snow in the Basin is all gone with the exception of drifts.

Very little growth has been made by winter wheat. Warmer weather is needed to start grasses.

Only part of the 1927 wheat crop, which was held over winter in shocks, is threshed. The few farmers whose fields are in this condition are looking forward to a rush with their spring work coming on.

No field work has been done in this section. A few days of good weather would make field conditions favorable.

Maximum temperature, 54, minimum, 15; precipitation .28 inch.

HUNTLEY:

Field work was possible during the first four days of the week. During this period the preparation of ground for small grains was completed on the rotation and miscellaneous fields, and most of the seeding was done. Precipitation in the form of rain and snow drove teams from the field on the 20th and it will require a day or two of drying weather before the soil is again in condition to work.

Huntley, continued:

Because of the rather cold and cloudy weather, fall sown grains and perennial crops have not made much growth during the past week. A few warm days would be desirable to induce a more rapid growth of winter wheat in plats where the stands are thin and weeds are getting a start.
Maximum temperature, 60, minimum, 23; precipitation .37 inch.

SHERIDAN:

Very little field work was possible during the week. Another storm with rain and snow occurred the evening of the 14th, and light rain or snow occurred almost every day of the week in just sufficient quantity to keep the surface of the ground too wet for work.

Spring wheat in the rotations and the middle of April date of seeding wheat, oats, and barley were seeded on the 17th, but with considerable difficulty because of the wet ground. Barley and peas in the rotations were seeded this afternoon, April 21.

Winter grain and grasses have made but little growth in the past two weeks. Some weeds are making a fast growth, however.
Maximum temperature, 61, minimum, 24; precipitation .96 inch.

DICKINSON:

Cold and mostly cloudy weather continued all week. The ground was frozen each morning so that field work was delayed until the middle of the afternoon or later. The minimum temperature was 14 degrees but some stations in the State reported below zero on the morning of April 19.

Oat varieties were seeded April 16 and barley varieties on the 17th.

Ground was prepared on Field O and 25 plats of wheat were seeded on April 21.

Some time was spent in cleanup jobs about the station. The winter mulch was removed from some of the shrubbery.
Maximum temperature, 60, minimum, 14; precipitation .14 inch.

MANDAN:

Agronomy

The past week has been unfavorable for all field work. The only seeding possible was brome grass, field peas, and one seed block of wheat.

Mandan, continued:

About 3 to 4 inches of snow fell on the night of the 17th. This snow is going off very slowly. It will be early in the week before field work can be resumed, even with very favorable weather conditions.

The week has been very cold for this time of year. On the night of the 18th the temperature dropped to 1° F., above. This is the coldest temperature recorded for this time of year since the station started. The U. S. Weather Bureau at Bismarck reports the lowest temperature for this time of year since records started in this area.

Seeding has been delayed over the Missouri Slope in general. Some sections, however, report seeding further advanced than last year at this time.

The precipitation for the winter was very light, and was:- January, .20 inch; February, .07 inch; March, .23 inch; April to date, .44 inch. The 50-year average to April 1 for this area is 1.88 inches.
Maximum temperature, 55, minimum, 1; precipitation, .41 inch.

Arboriculture

Cold, cloudy weather is preventing the thawing out of the heeled in stock, so that shipping of trees, except for a few replacements, has not yet been possible.

BELLE FOURCHE:

Cool, cloudy and threatening weather has prevailed throughout most of the week. Small amounts of precipitation were recorded every day but one, and the temperature has fallen three degrees or more below freezing every night.

Plant growth has been retarded by the cold weather, but winter rye is tillering vigorously, and winter wheat has made some improvement. None of the crops seeded about 10 days ago is up, but oats and barley are well germinated and wheat is commencing to sprout.
Maximum temperature, 64, minimum, 20; precipitation .12 inch.

ARDMORE:

The whole week was cold, windy, and threatening, but no measurable amount of precipitation was received. The only field work done was the hauling of manure to some of the fields. The station grounds were cleaned up on the 19th and 20th.

Ardmore, continued:

A carload of gravel to be used in the construction of a farrowing house was hauled during the week. Sand and gravel from the pit on the station were hauled for use in grading up around the building. Bids for materials to be used in the construction of the farrowing house were issued on the 17th.

The condition of the winter grains is generally good. A few plats were damaged materially by soil blowing, but most of the plats are in excellent condition.

Some early planted fields of oats and barley emerged during the week. The grain planted two weeks ago has barely sprouted.

All early native and cultivated pasture grasses were somewhat damaged by freezing. It is probable that some of the small grain was injured, but the amount of damage was small

Maximum temperature, 75, minimum, 21; precipitation, Trace.

AKRON:

The weather remained dry through the fore part of the week. A hard soil blowing wind, the second of the season, was experienced Thursday. Today, April 21, this region is receiving a light snow impelled by a moderate northeast wind. This moisture is very welcome but it is not felt that it is falling in an amount commensurate with the needs. It is hopeful moisture, however, in that it marks the breaking of a rather severe early spring drought.

The rotation corn and sorghum plats were plowed and packed, and one of the sheep rotation fields plowed and packed before the snow storm of today. The Cereal Project roadways were laid out and a start made towards trimming the plats to regulation 8-rod lengths. Ground is beginning to turn up hard and dry.

Winter wheat stands on the rotations have suffered markedly during the past two weeks of dry weather. There appears to have been as high as 50% killing on some of the fallow and green manure plats. There is a very apparent observable difference in the amount of killing on the fallow plats seeded with furrow drill and those seeded with common drill. There has been no observable killing on the fallow plats seeded with the furrow drill.

Akron, continued:

There has been no observed killing on the rate and date or on the winter wheat variety experiments though the stands on the corn ground portion are and have been very thin since the opening of spring. The November 1 seeding is just now emerging.

Small grains seeded near the first of April are emerging, showing favorable soil moisture conditions at that time.

Sweet clover pastures across the railroad are not favorable. There was no germination of sweet clover last year, due possibly to the dry fall. There is as yet no germination on the open, bare portion which was clipped in June of last year though the ground was immediately seeded with scarified seed. There is emergence on the uncut portion down under the thrash but not on the open, exposed areas. It is possible that cool, damp weather would cause more general emergence over the whole of the field.

The mixed grass pasture across the railroad appears now to be dominated by the slender wheat grass. This is making growth and only needs moisture to spring to the point where it will furnish pasture. Brome grass and meadow fescue and sweet clover were also seeded on this field.

Nine of the ten acres devoted to sweet clover for hay were broken out during the past ten days preparatory to seeding to annual pasture grasses for hogs.

Maximum temperature, 78, minimum, 26; precipitation, Trace.

NORTH PLATTE:

Cool, dry, cloudy, windy weather, very unfavorable to crop growth, has prevailed throughout the week.

Spring grains are struggling to emerge but a dry surface soil and continuous whipping of the wind have impeded progress, so that the plats are but little greener than they were a week ago. Winter wheat is scarcely holding its own on the station. From some surrounding districts, severe wind damage has been reported.

Roadways have been lined out and cultivated to destroy volunteer grain. Most of the weeds which had started growth have been killed back by freezing.

Potatoes were planted on the D. L. A. plats April 17.

Winter wheat came through the winter in fair condition on the station. The Dry Land Agriculture plats are, at the present time, as representative of the tillage method as they could be expected to be. Winter wheat on fall plowing winter killed very severely. This was caused by the excessively low temperatures during December while the surface soil was dry. All plats have sufficient stand to warrant leaving. A few plats show border effect of the grasshopper depredations of last fall. The D. L. A. plats were seeded prior to the rain which fell the last of September. Wheat on the station that was seeded after this rain shows less winterkilling than that seeded prior to the rain. Winter wheat has a good color.

The prospects for a good crop in the county are very poor. There are many good fields but there are also many fields that are a total failure even now. It is quite possible that more than one-half of the seeded acreage in the county could be classed as a total failure at the present time. The wheat has a supply of moisture in the surface foot in all preparations at the present time. On land summer tilled the previous year the moisture is into the second and third foot. Soil moisture sampling is being continued on eight winter wheat plats this season.

Barley, spring wheat, and oats were all seeded the last of March. Spring wheat shows excellent stands on all preparations. Oats and barley are most too thin on several plats while the stands are insufficient on all plats.

Climatic conditions have been both favorable and unfavorable. The low temperatures of December thinned out the wheat. The climatic conditions of January, February, and March were quite favorable, for the most part, for wheat growth. April to date has given some moisture which was of some benefit to the spring seeded grains and also several days of soil blowing that were both disagreeable and that punished the crops. Soil blowing occurred on several fields near the station. The temperatures of March were relatively warm, while April has furnished several unpleasantly cold days.

The precipitation for the year is below normal if we consider April. Wind velocities during the winter months were below normal while the wind velocities for April are above normal. Apricots bloomed the last of March and have been frosted several times. Plums are just now in full bloom. Cherries are not blooming but peaches are coming into blossom.

HAYS:

Temperatures varied during the week from a minimum of 24 to a maximum of 78, but average rather low for the week, with considerable high wind..

Hays, continued:

The freezes of last week and during the first part of this week slightly blackened the tips of the wheat; this together with the punishment of the wind, that occurred when the air was rather dry, has temporarily checked the growth of wheat, which it is believed is a very good thing for the heavy growth wheat and does not seem to have injured the lighter growth wheat. The freezes also set back the spring grains, but there appears to be little if any permanent injury. Rain which has been falling in the form of mist and sprinkles all day today, April 21, with a total at nightfall of .20 inch, with more falling, will push the growth again.

Field work during the week consisted largely of soil moisture determinations and pick-up jobs, and the preparation of sign boards and stakes for marking of plats and parts of the project that are of most interest to visitors.

GARDEN CITY:

The past week has been a windy one. While no extremely high wind velocity was recorded there has been more or less wind all week. Temperatures have been about normal for this time of the year. The past two days have been cloudy. Four hundredths of an inch of moisture was recorded this morning.

Winter wheat has made a satisfactory growth and the spring small grains are just beginning to emerge.

Field work consisted of spring tooth harrowing all of last year's fallow plats.

Maximum temperature, 80, minimum, 27; precipitation, .04 inch.

DALHART:

The past week has been moderately windy with continued dry weather and low temperatures. At this writing there are favorable indications for precipitation. There have been no more temperatures recorded as low as last week but the weather has remained cool.

Work during the week consisted of cultivating for prevention of soil blowing, tree planting, watering of trees and shrubs, reflooring the scales, trimming and cleaning hedges and other odd jobs.

The small grains are still holding out and making some growth but they are all looking rather sickly. There is considerable rolling during the days.

Dalhart, continued:

The fields are in readiness to begin planting of various crops as soon as planting dates arrive. The cotton date variety planting will be made first, beginning May 1. The general fields have not been plowed yet but will be started the first of the week if possible.

Fruit prospects at this date are still somewhat more favorable than last year. We have about a 20% crop of apricots, the largest prospect we have ever had on these, and a sufficiently heavy crop for the cherries. The Compass cherries stood all the freezes without loss. These were in full bloom during the heaviest freezes and not one was found damaged.

Maximum temperature, 85, minimum, 29; precipitation, 0.

TUCUMCARI:

Work the past week has consisted chiefly of a completion of the general spring clean-up, preparatory to full-time field work. Permanent stakes were placed in the new cooperative plat field, water was hauled to a large number of March planted trees, raking of lawns was completed, the Ford truck was overhauled, and wheat seeded last fall on orchard and vineyard plowed under, after serving its purpose as soil-blowing preventative.

A minimum temperature of 28 on the 15th doubtless injured some apples and cherries, but enough blooms remain unharmed to make the trees at present a mass of white. Peach trees are being pruned severely, since all blooms were killed some weeks ago. Grapes are just beginning growth, while the buds on some of the 600 cuttings seem to indicate a good percentage will start growth, at least. Hedges, lawns and trees have responded rapidly to the warm weather of the past few days.

Continued cloudiness much of the week has indicated rain, and this is greatly needed, for while the first foot is well supplied, a total of only 2.07 inches has been received since late September, practically seven months.

Maximum temperature, 87, minimum, 28; precipitation, 0.
Evaporation, 1.932 inches. Average hourly wind velocity, 6.3 miles.

BIG SPRING:

Weather conditions during the past week have varied considerably. Following the snow storm, which occurred on April 14, the thermometer dropped to 27 above zero the next night; two days following this the maximum thermometer registered 97.

Big Spring, continued:

The first date of seeding of grain and forage sorghums and cotton was made April 16. It is very doubtful as to whether this planting will emerge or not before it rains. The recent snow left the surface soil fairly moist at planting time, but the high winds during the week dried it out very rapidly.

Wheat, which had been sown in the orchard and vineyard to stop soil blowing, was plowed under this week. Other work during the week has consisted mainly of fixing a ditch to prevent washing of the plats.
Maximum temperature, 97, minimum, 27; precipitation, .17 inch.

LAWTON:

Small grain crops, especially wheat and winter barley, suffered acutely during the week for the lack of moisture. A sufficient number of basal leaves and tips of the upper leaves are dead to give the plats a yellow-brown cast. Growth has been practically at a standstill.

High winds prevailed most of the week. Minimum temperatures of 26 and 35 were recorded April 15 and 16, respectively. On the 17th a maximum temperature of 91 was recorded. The latter part of the week has been cold, cloudy and threatening, finally resulting in 0.82 inch of precipitation, April 20 and 21.

All row crop land is in a good state of cultivation and is now ready for final preparation previous to planting.

Corn planted April 2 was up to a good stand on the 18th. The first planting of cotton including six varieties was made April 16.

A few heads of winter rye are showing but the plant growth is very meager.

WOODWARD:

The past week the first date of cotton and corn in date tests were planted, also corn and artichokes on the rotations. Some cultivation was done to stop blowing, and manure spread for the same purpose. The last straggling trees and shrubs were planted, as was a bushel of Chinese elm seed. The vineyard trellises were gone over, wires tightened, and broken cross arms and posts replaced. Some grading of roads and filling in of old washouts was accomplished.

Today, April 21, a steady rain is falling which if it continues long enough will make prospects for wheat much brighter. Wheat generally needs moisture.
Maximum temperature, 84, minimum, 28; precipitation, Trace.
Evaporation, 1.959 inches. Average hourly wind velocity, 10.2 miles.

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PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

APR 28 1928

REPORT FOR WEEK ENDING APRIL 28, 1928.

HAVRE:

Temperatures have increased during the past week until the maximum of 83 was recorded on the 27th. The minimum for the first two days of the week was below freezing.

There has been practically no precipitation with the result that the week was very favorable for farming operations. Wheat, oats, barley, rye, sweet clover, brome grass, alfalfa, and peas were all seeded on the rotations during the week. With the exception of potatoes, seeding on the irrigated rotations was completed also. Most of the miscellaneous planting is completed, including the methods of fallow and Marquis on the forage rotations. Spring wheat varieties were also seeded.

Spring rye seeded on the 16th is up in good shape but none of the other grains planted at that time have emerged although most of them have sprouted. Winter wheat is making some growth and it now looks as though our stands will be pretty good with the exception of fall plowing. That stubbled in and that on fallow shows the most vigor at this time.

Domestic grasses have made very rapid growth during the past week. That in rows is now long enough for good grazing.

Seeding has progressed very rapidly in this section of Montana. Conditions have been so very favorable for preparing seed bed that a large amount of wheat is going in under quite favorable conditions, although there is a large percentage of the crop that will be on disked stubble or very poor plowing.

JUDITH BASIN:

The weather during the past week developed favorably for growing crops. Although starting out cool and backward three days were especially favorable to growing crops. A strong wind developed during the last day of the week. Some of the over cultivated soil will undoubtedly blow but should cause no serious damage at this date. Winter wheat has made a noticeable growth. On the tillage experiments the poorer methods are showing poor stands. Wheat seeded with the furrow drill is looking better than that seeded with ordinary drills.

In the Basin most fields of winter wheat are looking good. Some fields are spotted with poor stands showing up. Where improper methods have been used or where unfavorable conditions have developed from exceptionally early seeding or poorly protected land, reseeding will be necessary. This should not exceed 25% of the winter wheat acreage in this section. A few more favorable days will develope conditions regarding this crop more definitely.

Judith Basin, continued:

All grasses have made a noticeable growth. Alfalfa and sweet clover is starting. Buds are appearing on the earlier trees.

Field work on the station has gone forward in good shape. Spring plowing on the rotations is completed and all methods for early seeding prepared. Date of seeding tests and most of the small grains on the Cereal project are seeded. The large alfalfa field and forage experiments have been disked.

Trees for replantings in the orchard arrived from Mandan and these were set out the first of the week. An early planting of garden seed has also been made.

Farmers in the Basin have been busy the last few days preparing fields for spring crops. Seeding is just starting but will go forward with dispatch if the weather conditions are favorable for a week.

Maximum temperature 78, minimum 28; precipitation, 0.

HUNTLEY:

Good growing weather has prevailed throughout the greater part of the past week and has been reflected in the marked progress made by fall-sown grains, alfalfa, and pasture grasses. Up until this time climatic conditions have been more favorable to the growth of weeds than they have to cultivated crops. As a result, plots of winter wheat having thin stands promise to be more or less weedy this season notwithstanding the weed control measures that have been tried.

Spring sown crops are just beginning to emerge. Plats on which the crops were stubbled in have required an extra double harrowing since seeding in an effort to destroy a second growth of weeds that have recently appeared. Alfalfa and brome grass plats have also been given a second working with the spring tooth harrow to eradicate the new weed growth.

The first round of soil samples was taken during the week. As might be expected, plats that were in fallow during the unusually wet season of 1927 are well supplied with moisture to a depth of about four feet in most cases. Land that was in corn on grain last year shows a moisture penetration of from 18 to 24 inches on most plats and a little deeper in a few instances. This is about the normal depth for spring soil moisture on cropped land at this date in this locality, and does not support the newspaper stories and the beliefs of many farmers that

Huntley, continued:

such land is unusually well supplied with water this season. This propaganda together with the rather high price of wheat during the last week or two has stimulated a desire among farmers to stubble in a larger acreage of spring wheat than usual in this section. Considerable new land is also being broken for immediate cropping to grain or flax.

Station visitors during the week included Mr. J. M. Stephens. Maximum temperature 85, minimum 32; precipitation, 0.

SHERIDAN:

The entire week has been most favorable for field work and to start growing crops. Seeding of small grain, brome, and alfalfa in the rotations, the varieties of spring grain, rates of seeding spring grain, extra tillage methods with spring wheat, and the dates of seeding spring grain to date, were completed. Seeding of barley for feed is in progress. Preparation of fields for seeding spring grain for increase and feed and for seeding down proposed pastures progressed throughout the week.

Winter grain, grasses, alfalfa, and sweet clover began rapid growth during the week. The first of April seeding of spring grain emerged during the week. Seeding was general throughout this section and a large acreage already has been seeded.

Mr. J. M. Stephens visited the station the 25th. Maximum temperature 80, minimum 26; precipitation, 0.

MANDAN:

Agronomy

The past week has been fairly favorable for field work. The weather has warmed up a good deal over last week, but still remains cool.

Wheat has germinated in good shape and if the weather remains favorable, it should be up in a few days.

Oats were seeded on April 24 and barley on the following day. The time between wheat seeding and oats seeding was the longest since the station started. This spread was caused by bad weather and snow. About 15 acres of oats in field P (for feed) were also seeded, and about four acres of barley in the south field.

Mandan, continued:

The indications are that winter rye winter killed nearly 25 per cent on some plats. The winter wheat all killed out except a few plants.

Crested wheat grass has made a good growth and would make very good pasture at present. Alfalfa is just getting started.

The total precipitation since January 1 to date is .94 inch, with .44 inch since April 1. The 50-year average is about 3.50 inches. While the soil is still in fairly good condition, rain will soon be needed.
Maximum temperature 69, minimum 18; precipitation, 0.

Horticulture

Tree planting has been delayed somewhat by the stock being frozen in the ground, but is now in full swing. Replacements have been made in the orchards and cultural experiments and hybrid material is now being planted in the breeding blocks. Fruit trees have been shipped to horticultural cooperators.

Due to the cool weather, trees will bloom considerably later than usual this year, which may be of some advantage in escaping frost injury.

The first planting of vegetables in the Acre and Coulee gardens was done on April 24, and included onions, parsnips, carrots, Alaska peas, lettuce, radishes, and spinach.

Transplanting of tomatoes from the greenhouse to cold frames for the breeding project has been carried on during the week. This will be finished Saturday.

ARDMORE:

The week was dry and moderately warm. No precipitation was received but the moisture in the soil is adequate for the present needs of crops. Alfalfa and native grasses are commencing to show noticeable growth. Winter grains have tillered considerably, and the plats not injured by soil blowing are showing marked improvement.

All plats of small grain and field peas in the rotations emerged during the week. The grain varieties are also up.

Plowing for corn and flax was completed during the week. The flax and alfalfa in the rotations, and the sweet clover in the variety tests, were planted April 28.

Ardmore, continued:

Breaking was commenced on a ten acre piece of bottom land on the Tucker place. This bottom land is probably subirrigated and will be used for growing alfalfa for the work horses.

The steers in the winter feeding test were weighed at the end of the sixth period. The total gains per steer to date is as follows:

Lot I	Straw and alfalfa	40.5 lbs.
Lot II	Alfalfa	70.0 lbs.
Lot III	Corn silage and alfalfa	148.0 lbs.
Lot IV	Wheat grass	83.0 lbs.

Mr. J. M. Stephens visited the station during the week.
Maximum temperature 73, minimum 22; precipitation, 0.
Precipitation for April to date, .27 inch.

ARCHER:

During the past week the weather has been favorable for field work and full advantage has been taken of it.

All spring tillage on the Dry-Land plats has been completed and the plats are being staked today. The seeding of barley in the dairy field is in progress. The plowing of the last sod in the dairy field is completed. The tractor is operated 18 hours per day and the work is progressing rapidly. Considerable cleaning of the yards has been accomplished and a portion of the trees have been cultivated.

Prof. E. C. Chilcott and Mr. J. M. Stephens visited the station April 19. State Commissioner of Agriculture, L. T. Oldroyd visited the station April 26.
Maximum temperature 57, minimum 16; precipitation, .12 inch.

AKRON:

The snow reported last week netted only .17 of an inch of moisture.

Days continue to pass without rain. The spring grains seeded April 1 have emerged to uniform stands. Winter wheat stands are becoming thinner every day, though there promises to be enough survival for an average crop. The fear now is that these thin plats will become excessively weedy whenever the rains come.

Akron, continued:

The A, B, E, and F plats of the MC winter wheat series and the winter wheat plats of Rotations 591, 571, MCB', 572, 568, and the C plat of Rotation 568 were reseeded April 25 to Marquis spring wheat. These plats never emerged since they were seeded last fall. The trimming of the plats and the working-out of the station roads was completed.

The Russian apricot is in bloom this week end.
Maximum temperature 67, minimum 26; precipitation, .17 inch.

BELLE FOURCHE:

The weather has been comparatively warm and dry. Only .01 inch precipitation was received, and the surface soil has become quite dry and loose. A good rain is badly needed to relieve the danger of soil blowing and, also, to permit the germination of grasses and sweet clover seeded during the week.

The warmer weather has been favorable to plant growth, and hay crops and fall grains have made distinct advancement. Winter wheat has reocvered sufficiently on all plats that no reseeding apparently will be necessary. Spring wheat, barley, oats, and field peas are just beginning to come up. Sweet clover, seeded 12 days ago, has germinated but the soil is becoming so dry that the young clover plants may fail to survive if rain is not received at an early date.
Maximum temperature 77, minimum 24; precipitation, .01 inch.

NORTH PLATTE:

The past week was characterized by high winds and low temperatures. Freezing temperatures were recorded on all nights except Friday during the week. The minimum, 22 degrees, was recorded Thursday night. The temperature remained at this point for over an hour and probably did considerably damage to fruit. The maximum temperature for the week was 74 degrees.

Experimental potatoes were planted during the week. The first round of soil samples was completed. Most plats have a fair supply of moisture at present. The summer fallow plats contain more moisture than they have for several years. Winter wheat has not suffered for moisture yet but is rapidly nearing the point where it will.

Visitors at the station this week were W. W. Burr, Dean of the College of Agriculture, Prof. H. P. Davis, of the Dairy Department, and Mr. W. J. Dunman, landscape gardener at the University of Nebraska.

North Platte, continued:

Mr. L. L. Zook, and Mr. O. J. Grace, of this station, left Thursday to attend the field day at the Fort Hays Station.

COLBY:

Winter wheat continued to grow during the week. All fallow plats, with the exception of MF- N, are now covering the ground. The MF- N winter wheat plat winter killed fully 50% and the vitality of the plants were lowered so that growth is not so rapid on this plat. The MC plats A and B also killed approximately 50% and growth is also retarded on these plats.

Spring wheat is just now beginning to grow. A good stand of spring wheat was secured on all plats. Oats and barley are still thin in the row and are not growing much.

Work during the week has consisted of disking the commercial and variety fields that will later be listed to sorghums. All fields on the station have been worked this spring with the exception of a fall listed field. It is planned to work these fields and to work the D. L. A. roads this coming week.

Weather has remained dry and cool. Wind velocity has been relatively high on several days. April rainfall to date has been light. A good general rain is going to be needed badly and that quite soon.

GARDEN CITY:

The weahter during the past week has been typical of this time of the year. Temperatures have been somewhat below normal.

A rain measuring .63 of an inch was received last Saturday, the 21st, making a total rainfall for the year of 3.47 inches.

Winter wheat and other small grains have made a satisfactory growth. Moisture samples taken this week showed little soil moisture below the second foot on ground that was cropped last year.

Maximum temperature 71, minimum 35; precipitation, .63 inch.

DALHART:

The past week has been rather cool but moderately windy. One small shower was recorded, netting .18 inch. This came in a very slow drizzle, lasting for several hours during the late evening and early night.

Dalhart, continued:

Fruit prospects at present are quite promising, considering the late freezes. There will be a pretty good cherry crop on some varieties, others are going to be thin. However, the most promising varieties will have a sufficiently heavy crop for the trees. There are going to be some apricots this year which is unusual. The grapes are just beginning to show signs of leafing. The seed prospects of the Chinese elm were ruined by the late freezes and heavy winds. A lot of the seed which set on was blown away during the winds so that there is not enough seed on the trees to make an effort at gathering.

Field work for the week has consisted of cultivating for soil protection, plowing and fencing oat plats. Poison salt blocks which were placed out in the field last fall were brought in and refilled with poisoned salt during the week and placed around the small grain plats. A number of jack rabbits have been killed by this method. A good amount of hedge was set out this week from tamarac cuttings. This planting was made so as to beautify the grounds around the station buildings.

The small grains are making a good growth in spite of the dry conditions which have prevailed. The farmers are beginning to get a little blue again since April has passed without rain.
Maximum temperature 83, minimum 30; precipitation, .18 inch.

TUCUMCARI:

Conditions are favorable for spring field work, since a total of 1.66 inches precipitation has been received this month. During the week fall plowed plats were double disked, the vineyard and tree rows spring tooth harrowed, and the following cooperative blocks plowed and harrowed: forage sorghums, corn, cotton and peanuts.

Most increase land has been listed and is ready for leveling preparatory to planting. Very little planting will be attempted before May 15, aside from a small number of early date cooperative plots.

This afternoon, the 28th, the station was visited by Governor Dillon, Lt. Gov. Pankey, and party.

On the 27th about forty delegates to the Federated Clubs convention, meeting in Tucumcari, were given an auto trip by the Lions Club and the station was included in the itinerary. On May 25 and 26 the State Banker's Association meets in Tucumcari and their program includes a visit to the station.

Tucumcari, continued:

Mr. J. R. Horton, Bureau of Entomology, Wichita, Kansas, spent two days here this week examining date corn plat stubble to determine winter survival borers.

Maximum temperature 83, minimum 35; precipitation, .72 inch. Evaporation, 1.696 inches. Average hourly wind velocity, 6.1 miles.

BIG SPRING:

Weather conditions have not improved any during the past week. Winds have been rather high during this time, but they have not been strong enough to cause any soil movement. Soil is very dry; farmers are patiently waiting for a rain in order that they might go to planting.

What little winter wheat there is in the county is suffering from the lack of moisture. In several places the wheat has died, while in others it is barely alive. The station wheat is just about gone; that on the disked cowpea land is holding up better than that on the MC plats.

Some good stands have been obtained from the winter seedings of sweet clover, but they will not last long unless it rains.

The station cotton seed was sterilized today for the purpose of killing all pink boll worm larva that might be in hibernation. Two gins are equipped with seed sterilizers and have been busy during the past two months sterilizing all of the cotton seed in the county. Other work during the week has consisted of hauling dirt for roadways and in hoeing and disking the orchard.

Maximum temperature 96, minimum 40; precipitation, 0.

LAWTON:

Small grains have improved much in appearance following the .82 inch precipitation April 21, and the .50 inch on the 26th. A few scattering heads of winter barley are in sight and rye has been heading at a very ragged height for over a week.

Alfalfa makes practically no growth and probably will not yield any hay of consequence from the first cutting. On creek bottom land the crop is in much better condition. Sweet clover is making a fairly good second year growth. Seedings of the crop on April 6 of this year are as yet showing poor germination.

Continuation of intervening periods of low temperatures holds the growth of corn in check. The late spring freezes have made replanting necessary on some of the fields in the county.

Lawton, continued:

Germination of grain sorghums and cotton planted April 14 is, so far, slow and unsatisfactory.

A rain of .50 inch and enough fine hail to cover the ground fell within a ten minute period on the 26th. Although driven by a high wind crops were not damaged.

A maximum temperature of 85 and a minimum temperature of 35 were recorded during the week. Considerable frost accompanied the temperature of 35 but garden and field crops were not injured. The average wind velocity for the week was 8.4 miles per hour.

WOODWARD:

The entire peach orchard was very severely pruned this week and brush hauled. A second planting of Chinese elm seed was made. Plowing on the Cereal project was done and trash was scattered to prevent soil from blowing.

Wheat in this section is responding to the light rains of the past ten days and looking better than seemed possible a month ago.

Maximum temperature 77, minimum 36; precipitation, 1.30 inches. Evaporation, .940 inch. Average hourly wind velocity, 7.4 miles.